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09/706,501	11/02/2000	Oleg Rashkovskiy	ITL.0778US (P10142)	8091
21906 7590 05/30/2012 TROP, PRUNER & HU, P.C. 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER REVAK, CHRISTOPHER A	
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* OLEG RASHKOVSKIY and ERIC C. HANNAH

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Appeal 2010-002412  
Application 09/706,501  
Technology Center 2400

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Before SCOTT R. BOALICK, THOMAS S. HAHN, GLENN J. PERRY,  
*Administrative Patent Judges.*

PERRY, *Administrative Patent Judge.*

DECISION ON APPEAL

## SUMMARY

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claim 9, which stands rejected under 35 U.S.C. § 102(b) as anticipated by Candelore.

We reverse.

## STATEMENT OF CASE

### *Invention*

Appellants' invention relates to protecting a "content item" (e.g., a digitally encoded movie, or a electronic programming guide) by reordering blocks of the content item prior to transmitting it to a receiving device. The receiving device constructs a block reordering structure which is used to access the reordered content item, to facilitate retrieval of a desired block from the original content item. *See generally* Abstract. Claim 9 is reproduced below with the disputed limitation emphasized:

9. An apparatus comprising:

a storage device to store an original content item in multiple blocks, each block containing at least a single byte, the blocks stored in a logically linear fashion within the storage allocated for the content item;

a key generator to generate a key according to an identifier value of another apparatus; and

a reorderer to reorder the blocks of the original content item according to the key without reordering the bits within the blocks, the reordered blocks stored in a nonlinear fashion within the storage allocated for the reordered content item,

wherein the reordered blocks include *a first reordered block of a first block size and a second*

*reordered block of a second block size which is  
different than the first block size.*

### EVIDENCE CONSIDERED

The Examiner relies on the following as evidence of unpatentability:

Candelore	US 6,061,449	May 9, 2000
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### CONTENTIONS<sup>1</sup>

The only disputed limitation of claim 9 (*italics above*), relates to whether or not Candelore teaches that at least two re-ordered blocks should be of different sizes. The Examiner concludes that Candelore teaches this limitation. Ans. 4-5.

Appellants argue that even if Candelore teaches using *any* block size, Candelore does not teach using *different* block sizes within the same re-ordered set. App. Br. 10.

Thus, the issue before us is:

### ISSUE

Under § 102, has the Examiner erred in rejecting claim 9 by finding that Candelore teaches that the re-ordered blocks include at least two blocks that are different sizes?

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<sup>1</sup> Rather than repeat the Examiner's positions and Appellants' arguments in their entirety, we refer to the following documents for their respective details: the Amended Appeal Brief (App. Br.) filed November 9, 2007 and the Examiner's Answer (Ans.) mailed December 26, 2007.

## ANALYSIS

Based on the record before us, we find error in the Examiner's rejection of claim 9.

The Specification describes the "different size" feature of original dependent claim 9, now written in independent form, at page 5, ll. 5-6: "The blocks which are being rearranged may be the same size, or they may vary in size. Same size lends itself to simpler processing, while varying size may lend itself to improved security."

The Examiner relies exclusively on Candelor. There is no dispute that Candelor teaches "[r]e-ordering of fields such as blocks or bytes within each chain, as well as among entire chains..." Candelore, col. 1, ll. 19-21. The dispute centers on what is taught by Candelore, col. 22, ll. 3-37, reproduced below:

In a further aspect of the present invention, re-ordering of the chain which is communicated from the external storage device to the ASIC 105 is provided. This re-ordering is used in addition to the scrambled storage of the blocks in the storage device, discussed below, but it is possible to use the re-ordering by itself. By randomly re-ordering the blocks in the chain, a pirate is deterred from detecting information regarding the execution sequence of the program information in the processing circuit. As with byte- and chain-level re-ordering, block re-ordering can be done randomly such that repeated execution of the same code will fetch data from the external memory in difference sequences each time. For example, with byte level re-ordering, if there are eight bytes per block, there are  $8!=40,320$  different sequences in which the bytes may be ordered. Similarly, for block reordering, if there are sixteen blocks per chain, there are  $16!=2.09 \times 10^{13}$  different sequences in which the blocks may be ordered. For chain reordering, if there are 4 chains per program information sequence, there are  $4!=24$  different sequences in which the chains may be ordered. And, it is possible to use all three together.

The total number of possible permutations would then be  $40,320 \times 2.09 \times 10^{13} \times 24 = 2.02 \times 10^{19}$ .

It is important to realize that any field can be the basis for re-ordering and that bytes, blocks and chains are arbitrary units for bits. The fields being re-ordered could be nibbles. Also, bytes do not have to be eight bits, nor blocks 8 bytes, etc.

With this in mind, the re-ordering operation could allow bytes to be re-ordered across two or more blocks, blocks across two or more chains, and chains across two or more program information sequences. Here, we get a different result. For example, with byte level re-ordering, if there are eight bytes per block reordered over two blocks, there are  $16! = 2.09 \times 10^{13}$  different sequences in which the bytes may be ordered.

It is undisputed that this portion of Candelore teaches chain re-ordering, block re-ordering, byte re-ordering, and even nibble re-ordering. For each of these types of re-ordering, the number of possible re-ordered configurations are calculated. It is also undisputed that this portion teaches that bytes can be re-ordered across two or more blocks, across two or more chains, and chains across two or more program information sequences.

The Examiner, in addition to the portion of Candelore reproduced above, relies upon Candelore, col. 22, ll. 40-47 and col. 30, ll. 50-64 for teaching that different chain lengths may be used and upon Candelore, col. 27, ll. 49-57 for teaching that chain length can be set according to processing latency of program information of respective chains. Ans. 5. Finally, the Examiner relies upon Candelore, col. 20, ll. 29-32 for its teaching that chain length can vary between 16-32 blocks and are varied on a chain by chain basis according to key and address parameters. Ans. 6. The Examiner concludes from these passages that Candelore teaches that reordered blocks

include “a first reordered block of a first block size and a second reordered block of a second block size which is different than the first block size” as required by claim 9. Under § 102, we do not appreciate how this conclusion is drawn from the Candelore teachings. It appears to us that Candelore teaches re-ordering blocks that are of a first size, and re-ordering blocks of a second size. However, we do not find an explicit or inherent teaching that one should re-order blocks of *different sizes* within a particular re-ordering.

For the foregoing reasons, Appellants have persuaded us of error in the rejection of claim 9, the only claim before us.

#### CONCLUSION

The Examiner erred in rejecting claim 9 under § 102.

#### ORDER

The Examiner’s decision rejecting claim 9 is reversed.

#### REVERSED

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